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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,169	12/06/2001	Masaaki Tarashima	JG-YY-5116 / 500569.2008	2891
26418	7590	03/11/2004	EXAMINER	
REED SMITH, LLP ATTN: PATENT RECORDS DEPARTMENT 599 LEXINGTON AVENUE, 29TH FLOOR NEW YORK, NY 10022-7650			NOGUEROLA, ALEXANDER STEPHAN	
			ART UNIT	PAPER NUMBER
			1753	

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/006,169	Applicant(s) TARASHIMA ET AL.	
	Examiner ALEX NOGUEROLA	Art Unit 1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>03/07/2002</u> . | 6) <input type="checkbox"/> Other: ____  |

### ***Drawings***

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g) and page 1, lines 19-23 of the specification. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the guide member (singular) must be shown or the feature canceled from claim 2. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

3. Claims 1 and 4 are objected to because of the following informalities:

- a) Claim 1, lines 19 and 23: "ares" should be -- areas --; and
- b) Claim 4, line 2: the second occurrence of "a" should be -- an --.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting an essential element, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are (a) a barrier or partition between the region of the hollow space that is to contain the sample solution and the region of the hollow space that is to contain the reference solution, and (b) a separate guide members for the sample solution and for the reference solution. Without such a barrier or partition the sample solution and reference solution will mix or diffuse together. So, there will not be two half cells necessary for a complete electrochemical cell. Similarly, if there is only one guide member that is shared between the reference solution region and the sample solution region the sample solution half-cell will be merged with the reference solution half-cell.

5. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention:

- a) Claim 1, line 8: -- are provided -- should be inserted between “which” and “are”;
- b) Claim 1, line 9: -- to outside the device -- should replace “outside”;
- c) Claim 1, line 10: “separately are provided,” should be replaced with -- separately --;
- d) Claim 1, line 20: -- to outside the device -- should replace “outside”;
- e) Claim 1, line 23: -- supplying to outside the device -- should replace “the supplying outside”;

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- f) Claim 1, line 26: -- each -- should be inserted between “electrodes” and “having”;
- g) Claim 1, line 28: “the” should be replaced with -- a different --;
- h) Claim 1, line 28-31: does bringing the ion selective membrane into contact with the sample solution and the reference solution separately mean that the ion selective membrane is alternately placed on the solution-supplying surface area and then the reference solution supplying surface area?
- i) Claim 4, line 5: “the” should be deleted;
- j) Claim 4, line 6: “area is” should be replaced with -- areas are --;
- k) Claim 5, line 4: “area is” should be replaced with -- areas are --;
- l) Claim 5, lines 3-4 require the solution-receiving areas to be on the upper surface, but lines 4-6 allow for the solution-receiving areas to also be on bottom surface or the side surfaces;
- m) Claim 5, line 4: “area is” should be replaced with -- areas are --;
- n) Claim 6, line 5: “the” should be deleted; and
- o) Claim 6, line 6: “area is” should be replaced with -- areas are --.

6. Note that dependent claims will have the deficiencies of base and intervening claims.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Seshimoto et al. (US 4,789,435).

Addressing claim 1, Seshimoto et al. teaches a device for measuring ionic activity (abstract) which comprises

a block of insulating material (**21** in Figure 2) having a hollow space therein, a solution-receiving surface area (**12**) in which a pair of openings for receiving a sample solution and a reference solution separately are provided, the openings connecting with the hollow space (Figure 3), a plurality of solution-supplying surface areas (**15a**, **15b**, **15c**) in each of which a pair of openings for supplying to outside the device the sample solution and the reference solution separately are provided, the openings connecting with the hollow space;

a bridge member (**19**) provided on the solution-receiving surface area for electrically bridging the sample solution received in one opening and the reference solution received in another opening;

a guide member (**16**) placed in the hollow space which assists to transmit separately the sample solution received in the opening in the solution-receiving surface area to the openings on the solution-supplying surface areas for supplying to outside the device the sample solution and

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the reference solution received in the opening in the solution-receiving surface area to the openings on the solution-supplying surface areas for supplying to outside the device reference solution;

and

a plurality of ion-selective electrodes each having an ion-selective membrane thereon (11a, 11b, 11c) each of which is placed on a different solution-supplying surface area under such condition that the ion-selective membrane is brought into contact with the sample solution and the reference solution separately.

Addressing claims 2 and 3, for the claimed guide member note the porous liquid-transmitting materials (16) in Figure 2.

Addressing claim 5, as seen in Figure 2 the solution-supplying surface areas are arranged on the upper surface of the device.

***Allowable Subject Matter***

9. Claims 4 and 6 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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10. The following is a statement of reasons for the indication of allowable subject matter:

Claims 4 and 6 each require at least two of the bottom surface and the side surfaces of the device to have solution-supplying surface areas. Seshimoto et al. only discloses having solution-supplying surface areas on the upper surface of the device. It would not have been obvious to provide solution-supplying surface areas on the side surfaces of the device and the bottom of the device of Seshimoto et al. because Seshimoto et al. teaches away from such a modification. Seshimoto et al. has the solution-supplying surface areas on the upper surface of the device so that the ion-selective membranes will face downwards. This is to avoid several problems that may occur with other orientations of the ion-selective membranes (col. 1, ln. 54 – col. 2, ln. 68 and col. 3, ll. 9-48).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEX NOGUEROLA whose telephone number is (571) 272-1343. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NAM NGUYEN can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alex Noguera

03/08/04

Primary Examiner

TC1753